

## CUSTOMER CASE STUDY

---

# Connected paper: Mondi uses AVEVA™ PI System™ to reach production goals

Mondi - [www.mondigroup.com](http://www.mondigroup.com)  
Industry - Forest and paper products

## Challenge

- A need to monitor, stabilize, and tune new production lines and processes

## AVEVA Solution

- Expand use of AVEVA PI System across the production line by making it a single source of truth for operations

## Result

- Increased visibility across the organization, saving €62,000 (about \$74,000) annually and improving environmental KPIs by 5-7.5%

As one of Europe's largest pulp and paper factories, Mondi Štětí is continually seeking ways to make better, faster decisions. Mondi strives to minimize environmental impact while maintaining consistent product quality.

For 19 years, Mondi has used AVEVA PI System to gather real-time intelligence, giving its engineers the insight needed to optimize equipment and processes. As its factory expanded, Mondi's journey with AVEVA PI System put the company on its way to reach lofty production goals.

## Foresight enables optimization

The Mondi factory produced 550,000 tons of paper products in 2018. After another banner year, the company's goal for 2020 was to produce 1 million tons of products. However, doing so required increased recovery and efficiency. Mondi needed additional output from its production line, and this meant DCS setting changes. In preparation, Mondi purchased new equipment, including a recovery boiler, two pulp digesters, and a steam turbogenerator, all of which had to be optimized to meet goals.

Nearly doubling production in just over two years is a lofty goal, but Mondi's engineering team was confident. The company had the foresight to lay the right foundation in 2000 when it installed AVEVA PI System. "My idea is to have the PI System as the standard in Mondi," said Miroslav Škrabánek, the company's technological data collection and AVEVA PI System manager. The company reached a turning point when it expanded its data-modeling and data-visualization capabilities in 2014. These upgrades enabled Mondi to build digital production models with Asset Framework (AF), a contextualization layer of AVEVA PI Server, to create displays and visualize results.

## A data-driven command center

In 2018, Mondi used AVEVA PI System to create its EcoFlex platform. Engineers in the control room can now obtain an overview of the entire factory in real time, including digesters, bleach plants, water treatment, and recovery. Each paper machine has its own real-time display, which highlights 24-hour performance, speed, target speed, percentage of production, and more. Users can see liquor and pulp storage, monitor liquor recovery and balancing, and recovery boiler production, as well as any changes in paper runs. All of the above are critical to expanding production efforts.

With the help of AVEVA PI System, energy dispatchers have access to steam and electricity consumption and production information, as well as turbine data. This information enables them to quickly understand

whether they'll be able to cover energy consumption using internal sources or whether they'll need to buy electricity or sell any excess.

The EcoFlex platform is also a critical part of Mondi's predictive-maintenance strategies. To understand future maintenance needs and repair costs, the EcoFlex platform displays the number of starts on each motor, vibration and condition data, and room temperatures.

## Increased efficiencies

Events such as paper breaks increase consumption and thwart production efforts. By visualizing production-line data streaming from paper machines and looking for ways to increase efficiency while decreasing unplanned stoppages, Mondi saved €38,000 per year with AVEVA PI System.

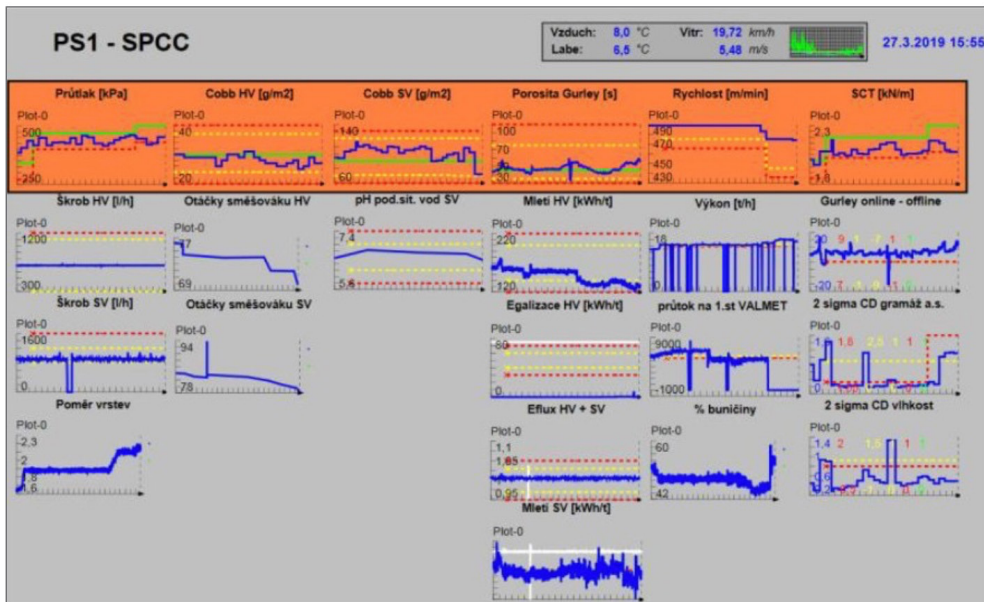
---

**"We use the PI System for finding so-called golden runs to find the best parameters for different kinds of products."**

- **Miroslav Škrabánek**

Technological Data Collection  
and AVEVA PI System Manager, Mondi Štětí

Energy consumption is closely linked to operational efficiency. Mondi needed to better monitor its natural gas usage because it purchased gas from an external supplier that charges overages at a premium. To ensure that energy consumption was within limits, the team used AF calculations to show actual and estimated future consumption. Then, operators took action to control usage, saving an estimated €14,000 per year. "We can control this consumption, and if we [do] ... we don't exceed the reserve capacity – it's very important," said Škrabánek. "So we save huge money in this case."



Mondi monitors the production of over 500,000 tons of pulp and paper annually using AVEVA PI System

## Environmental impact

For Mondi, company goals don't just center on production. Acutely aware of its environmental impact, the company set out to decrease pollution and emissions. Within its EcoFlex platform, a single process-control chart includes quality parameters.

The EcoFlex platform uses calculations and limit values in AVEVA PI System in conjunction with Event Frames, an AVEVA PI System feature that enables engineers to capture and analyze important process events. With this information, engineers can quickly identify which asset is the source of emissions, understand the amount of time it takes to burn off those gases, and determine the root cause. The EcoFlex platform empowers Mondi to make better decisions for the environment.

Thanks to the EcoFlex platform and AVEVA PI System, Mondi's data is democratized. Operators and managers can access DCS and PLC data from anywhere. They can tune and stabilize processes, improve balancing, manage energy consumption, and quickly solve production issues. Now, Modi is on track to reach its 2020 production goals.

For more information about AVEVA PI System, [click here](#).

